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EXAMINER
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MICHAEL A. KERESMAN III, RAVISHANKAR  
BHAGAVATULA, CHANDRA BALASUBRAMANIAN,  
and FRANCIS M. SHERWIN

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Appeal 2009-010020  
Application 09/488,297  
Technology Center 3600

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Decided: January 21, 2010

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Before HUBERT C. LORIN, ANTON W. FETTING, and BIBHU R.  
MOHANTY, *Administrative Patent Judges*.

MOHANTY, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

The Appellants seek our review under 35 U.S.C. § 134 (2002) of the final rejection of claims 23-24, 26-36, and 38-42 which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b) (2002). Oral arguments were presented on January 7, 2010.

## SUMMARY OF THE DECISION

We AFFIRM-IN-PART and enter a new grounds of rejection under 35 U.S.C. 112, second paragraph.

## THE INVENTION

The Appellants' claimed invention is directed to a method for conducting a commercial transaction carried out over the Internet (Spec. 2:29-31). Claim 23, reproduced below, is representative of the subject matter of appeal.

23. A method of processing a transaction carried out over a network between a financial account holder and a participating entity, said method comprising the steps of:

(a) receiving a purchase request of a buyer from the participating entity indicating that the buyer desires to carry out a transaction with the entity, said transaction including the buyer purchasing one or more selected items;

(b) authenticating the buyer as the financial account holder;

(c) establishing transaction fulfillment data, said transaction fulfillment data indicating a delivery destination for the selected items, wherein establishing the transaction fulfillment data includes using a previously obtained destination as the delivery destination for the selected items when an alternate destination is not obtained;

- (d) communicating the transaction fulfillment data to the participating entity;
- (e) receiving transaction details from the participating entity, said transaction details including a cost for the selected items;
- (f) authorizing completion of the transaction and establishing an authorization code therefor; and,
- (g) communicating the authorization code for the transaction to the participating entity.

### THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

Weiss	US 5,657,388	Aug. 12, 1997
Talati	US 5,903,878	May 11, 1999
Barzilai	US 6,012,045	Jan. 4, 2000
Hogan	US 6,315,193 B1	Nov. 13, 2001
Guzelsu	US 6,381,587 B1	Apr. 30, 2002
Demoff	US 6,456,984 B1	Sep. 24, 2002

The following rejections are before us for review:

1. Claims 23, 31, 36, 39, and 41-42 are rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff and Talati.
2. Claim 24 is rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, and Barzilai.
3. Claims 26-30 and 38 are rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, and Watson.
4. Claims 32-34 and 40 are rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, Hogan, and Guzelsu.

5. Claim 35 is rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, Hogan, Guzelsu, and Weiss.

### THE ISSUE

At issue is whether the Appellants have shown that the Examiner erred in making the aforementioned rejections.

This issue turns on whether it would have been obvious to modify Demoff with Talati to meet the claim limitation for “*receiving a purchase request of a buyer from the participating entity* indicating that the buyer desires to carry out a transaction with the entity, said transaction including the buyer purchasing one or more selected items”.

### FINDINGS OF FACT

We find the following enumerated findings of fact (FF) are supported at least by a preponderance of the evidence:<sup>1</sup>

FF1. Demoff has disclosed a method and system for providing temporary credit authorizations (Title). The method provides for issuing credit as payment in a consumer transaction which eliminates the need for a traditional credit card while also minimizing any potential for fraud or theft (Abstract).

FF2. Demoff discloses in Fig. 8 that a request for a credit number (300) is first sent for approval (302) and generation of a temporary unique credit number (312) before being forwarded to the vendor (316).

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<sup>1</sup> See *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Patent Office).

FF3. Demoff states that is an object of the invention to provide a system for issuing credit which minimizes the potential for theft or fraudulent use of credit (Col. 1:58-61).

FF4. Talati discloses a method and apparatus for electronic commerce (Title). A transaction order generated by a purchaser has a unique transaction identifier associated therewith and the purchase order is transmitted to a merchant and then to the transaction administrator (Abstract).

FF5. Talati discloses in Fig. 2 that the client (12) place a purchase order with credit card information to the merchant (13) who then sends the information to a Payment Authority who processes the request (14).

FF6. No algorithm is disclosed to show “means for authenticating the buyer as the financial account” at Figures 6A-6B, Figure 2, Spec. 13:20-24 and 20:15-24.

## PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary

considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 406 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) *Id.* at 407

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 415, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 550 U.S. at 415, (citing *Graham*, 383 U.S. at 12), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. The Court also stated “[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.” *Id.* at 417. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The Court noted that “[t]o facilitate review, this analysis should be made explicit.” *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court

can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

### ANALYSIS

We will reverse the rejection as to claims 41-42. As further explained below, we will enter a new ground of rejection of claims 41-42 under 35 U.S.C. § 112, second paragraph, because it is indefinite. Therefore, its rejection over prior art must fall, pro forma, as being necessarily based on speculative assumptions as to the scope of this claim. *See In re Steele*, 305 F.2d 859, 862-63 (CCPA 1962). Our decision in this regard is based solely on the indefiniteness of the subject matter and does not reflect on the adequacy of the prior art evidence applied in support of the rejection.

We now turn to the other claims.

The Appellants argue that the rejection of claim 23 is improper because the Examiner has failed to show any motivation for combining the teachings of Talati with the system of Demoff which is directed to providing temporary credit authorizations (Reply Br. 3). The Appellants argue that Demoff teaches away from the combination with Talati and that the Examiner has improperly simply concluded the combination is a “simple substitution” (Reply Br. 3).

In contrast the Examiner has determined that it would have been obvious to modify the system of Demoff with Talati to include limitation “(a)” from claim 23 as identified above “to allow the administrator to authenticate the buyer by confirming that the order originated from the purchaser and to insure fund availability” (Ans. 5). The Examiner has also



determined that the modification of Demoff with Talati is a “simple substitution of one concept for another producing a predictable result” (Ans. 9).

We agree with the Appellants. Demoff has disclosed a method and system for providing temporary credit authorizations which eliminates the need for a traditional credit card while also minimizing any potential for fraud or theft (FF1). Demoff specifically discloses generation of a temporary unique credit number before being forward to the vendor (FF2) and states that an object of the invention is to minimize the potential for theft or fraudulent use of credit (FF3). Talati discloses a method and apparatus for electronic commerce (FF4) in which the merchant does send the purchase order and credit card information to the Payment Authority (FF5).

Demoff’s disclosure is directed to the buyer contacting the third party to obtain a temporary credit card number to prevent fraud or theft when given to the seller. The proposed modification of Demoff to have the seller forward the purchase request information would defeat the very purpose of Demoff which is to prevent fraud and theft by providing only a temporary credit card number to the seller. There is further no articulated reasoning with rational underpinnings to modify Demoff to include the cited claim limitation “(a)” identified above in claim 23 and shown by Talati as such a modification would defeat the whole purpose and disclosure of Talati which is to prevent fraud and theft by the use of a temporary credit card number which is obtained by receiving the purchase request information directly from the buyer instead of the seller. The Examiner has failed to present a prima facie of obviousness for the above reasons. In rejecting claims under

35 U.S.C. § 103(a), the examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). For these above reasons the rejection of claims 23 and its dependent claims is not sustained. The Appellants have provided the same arguments for claims 26, 31 and 41, and the rejection of these claims and their dependent claims is not sustained for these same reasons.

The Appellants have provided the same arguments for claim 32. However, claim 32 fails to contain the same cited limitation (a) found in claim 23 and argued by the Appellants. For these reasons the rejection of claims 32 and its dependent claims is sustained.

#### NEW GROUNDS OF REJECTION

Pursuant to 37 C.F.R. § 41.50(b), we enter a new ground of rejection of claims 41-42 under 35 U.S.C. § 112, second paragraph as being indefinite

#### *Principles of Law*

Means-plus-function claim language must be construed in accordance with 35 U.S.C. § 112, paragraph 6, by “look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.” *In re Donaldson Co.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc).

When no structure is described in the Specification to support a means-plus-function limitation in a claim, the disclosure is inadequate to explain to one of ordinary skill in the art what is meant by the claim language. In such a situation, a means-plus-function claim would not be

amenable to construction and thus would fail to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

"[I]f one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed.Cir.1994) (en banc). .... This duty to link or associate structure to function is the *quid pro quo* for the convenience of employing § 112, ¶ 6. *See O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). "Fulfillment of the § 112, ¶ 6 trade-off cannot be satisfied when there is a total omission of structure." *Atmel*, 198 F.3d at 1382. While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function. *See Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1119 (Fed.Cir.2002).

*Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005).

When the means-plus-function limitation in a claim is a *computer-enabled* means-plus-function limitation, one must set forth in the specification sufficient description of an *algorithm* associated with the function recited in the claim in order to avoid a finding that an applicant has failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

It is certainly true that the sufficiency of the disclosure of algorithmic structure must be judged in light of what one of ordinary skill in the art would understand the disclosure to impart. *See, e.g., Intel Corp. v. VIA Techs.*, 319 F.3d 1357, 1367 (Fed. Cir. 2003) (knowledge of a person of ordinary skill

in the art can be used to make clear how to implement a disclosed algorithm); *Atmel Corp.*, 198 F.3d at 1379 (“[T]he ‘one skilled in the art’ analysis should apply in determining whether sufficient structure has been disclosed to support a means-plus-function limitation.”). That principle, however, has no application here, because in this case there was no algorithm at all disclosed in the specification. The question thus is not whether the algorithm that was disclosed was described with sufficient specificity, but whether an algorithm was disclosed at all.

*Aristocrat Techs. Australia Party, Ltd. vs. Int’l Game Tech.*, 521 F.3d 1328, 1337 (Fed. Cir. 2008).

When there is insufficient description of an algorithm in the Specification to support a computer-enabled means-plus-function limitation in a claim, the disclosure will be considered inadequate to explain to one of ordinary skill in the art what is meant by the claim language.

For computer-implemented means-plus-function claims where the disclosed structure is a computer programmed to implement an algorithm, “the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed.Cir.1999). Thus the patent must disclose, at least to the satisfaction of one of ordinary skill in the art, enough of an algorithm to provide the necessary structure under § 112, ¶ 6. This court permits a patentee to express that algorithm in any understandable terms including as a mathematical formula, in prose, *see In re Freeman*, 573 F.2d 1237, 1245-46 (CCPA 1978), or as a flow chart, or in any other manner that provides sufficient structure. The district court correctly determined that the structure recited in the ‘505 specification does not even meet the minimal disclosure necessary to make the claims definite. Simply reciting “software” without providing some detail about the means to accomplish the function is not enough. *See Aristocrat Techs. Austl. Pty v. Int’l Game Tech.*, 521 F.3d 1328, (Fed.Cir.2008) (“For a patentee to claim a means for

performing a particular function and then to disclose only a general purpose computer as the structure designed to perform that function amounts to pure functional claiming. Because general purpose computers can be programmed to perform very different tasks in very different ways, simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to ‘the corresponding structure, material, or acts’ that perform the function, as required by section 112 paragraph 6.”). This court does not impose a lofty standard in its indefiniteness cases. *See, e.g., Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1214 (Fed.Cir.2003). But in this case, the claims are already quite vague. Without any corresponding structure, one of skill simply cannot perceive the bounds of the invention.

*Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340-41 (Fed. Cir. 2008).

When a Specification discloses *no* algorithm corresponding to a computer-enabled means-plus-function limitation in a claim, an applicant has necessarily failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112. *See also Aristocrat*, 521 F.3d 1328, 1333 (*quoting Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005) (“‘[t]he corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification.’ *Harris* 417 F.3d at 1249.”); *Net MoneyIN, Inc. v. Verisign, Inc.* 545 F.3d 1359, 1367 (Fed. Cir. 2008) (“[A] means-plus-function claim element for which the only disclosed structure is a general purpose computer is invalid if the specification fails to disclose an algorithm for performing the claimed function.”). *See also Blackboard, Inc. v. Desire2Learn Inc.*, 574 F.3d 1371 (Fed. Cir. 2009) (finding Blackboard’s means-plus-function claims indefinite because the patent describes an

undefined component, *i.e.*, a black box, that performs the recited function but does not disclose how the component performs the function). *See further Ex parte Catlin*, 90 USPQ2d 1603, 1605 (BPAI 2009) (precedential) (during prosecution, computer-enabled means-plus-function claims will be held unpatentable under 35 U.S.C. § 112, second paragraph, as being indefinite if a Specification fails to disclose any algorithm corresponding to the recited function in the claims).

### *Analysis*

We reject claims 41-42 under 35 U.S.C. § 112, second paragraph as being indefinite.

We count seven limitations in claim 41 which are in means-plus-function format. We will focus on the “means for authenticating” limitation. But the analysis to follow applies equally as well to the other six means-plus-function limitations in claim 41.

The limitation “means for authenticating” includes the term “means.” A claim limitation that includes the term “means” is presumed to be intended to invoke means-plus-function treatment, *i.e.*, treatment under 35 U.S.C. §112, 6<sup>th</sup> paragraph. *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999) (“presumed an applicant advisedly used the word “means” to invoke the statutory mandates for means-plus-function clauses.”).

Construing means-plus-function claim language in accordance with 35 U.S.C. § 112, paragraph 6, is a two step process.

The first step in construing a means-plus-function claim limitation is to define the particular function of the claim limitation. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369,

1376 (Fed.Cir.2001). “The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations.” *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed.Cir.2002). Thus, according to the language of claim 11, the function of the “horizontal drive means” is “rotating said lamp unit in a horizontal direction.” Ordinary principles of claim construction govern interpretation of this claim language, *see id.*, and, for all the reasons discussed in the preceding two sections, we construe this function according to its ordinary meaning as not requiring rotation through 360°.

The next step in construing a means-plus-function claim limitation is to look to the specification and identify the corresponding structure for that function. “Under this second step, ‘structure disclosed in the specification is “corresponding” structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.’” *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed.Cir.2003) (quoting *B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed.Cir.1997)).

*Golight Inc. v. Wal-Mart Stores Inc.*, 355 F.3d 1327, 1333-34 (Fed. Cir. 2004).

*Step 1-* The first step in construing a means-plus-function claim limitation is to define the particular function in the means-plus-function limitation.

The particular function of the means-plus-function claim limitation at issue is “for authenticating the buyer as the financial account holder”.

Further, given the claim as a whole being directed to a “system for processing a transaction over a network” which we have construed as reasonably broadly involving a computer, one of ordinary skill in the art would construe the claim limitation “means for authenticating the buyer as

the financial account” to refer to a *computer-enabled* means-plus-function limitation.

*Step 2-* The next step in construing a means-plus-function claim limitation is to look to the Specification and identify the corresponding structure for that function. Given that the claim limitation “means for authenticating the buyer as the financial account” is a *computer-enabled* means-plus-function limitation, this requires looking to the Specification and identifying the algorithm corresponding to the function “authenticating the buyer as the financial account”.

In that regard, we note that in the Summary of Claimed Subject Matter (App. Br. 12), the Appellants have attempted to show where in the Specification, by page and line number, there is disclosed structure, material, or acts corresponding to each claimed function as required by 37 C.F.R. § 41.37(c)(1)(v) (2007). With regard to the claim 41 means-plus-function limitation at issue, the Appellants attempt to show that the disclosed structure is shown at Figures 6A-6B and Figure 2. We find no algorithm to disclose “means for authenticating the buyer as the financial account” at Figures 6A-6B and Figure 2 (FF6).

The Specification therefore fails to disclose an algorithm corresponding to the recited function at issue (FF6) in claim 41 such that one of ordinary skill in the art could determine the scope of claim 41. Accordingly, we reject claims 41-42 under 35 U.S.C. § 112, second paragraph, as being indefinite.



### CONCLUSIONS OF LAW

We conclude that Appellants have shown that the Examiner erred in rejecting claims 23, 31, 36, and 39 are rejected under 35 U.S.C. § 103(a) as unpatentable over Demoff and Talati.

We conclude that Appellants have shown that the Examiner erred in rejecting claim 24 under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, and Barzilai.

We conclude that Appellants have shown that the Examiner erred in rejecting claims 26-30 and 38 under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, and Watson.

We conclude that Appellants have not shown that the Examiner erred in rejecting claims 32-34 and 40 under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, Hogan, and Guzelsu.

We conclude that Appellants have not shown that the Examiner erred in rejecting claim 35 under 35 U.S.C. § 103(a) as unpatentable over Demoff, Talati, Hogan, Guzelsu, and Weiss.

We reverse the rejection of claims 41 and 42 under 35 U.S.C. § 103(a) as unpatentable over Demoff and Talati but enter a new grounds of rejection under 35 U.S.C. § 112, second paragraph.

### DECISION

The Examiner's rejection of claims 32-35 and 40 is sustained.

The Examiner's rejection of claims 23-24, 26-31, 36, 38-39, and 41-42 is reversed.

We also enter a new ground of rejection of claims 41-42 under 35 U.S.C. § 112, second paragraph.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner . . . .
- (2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record . . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)

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Appeal 2009-010020  
Application 09/488,297